



United States
Environmental Protection
Agency

Study Will Identify Pollution at Former Plant Site

Armco Hamilton Superfund Site

New Miami, Ohio

September 2005

For more information

You can contact these EPA representatives for more details, questions and comments about the Armco site.

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Documents on file

An information repository is a file for public review containing documents related to the project and the Superfund program. The Armco site information repository is located in the:

Lane Public Library
300 N. Third St.
Hamilton

Web site:

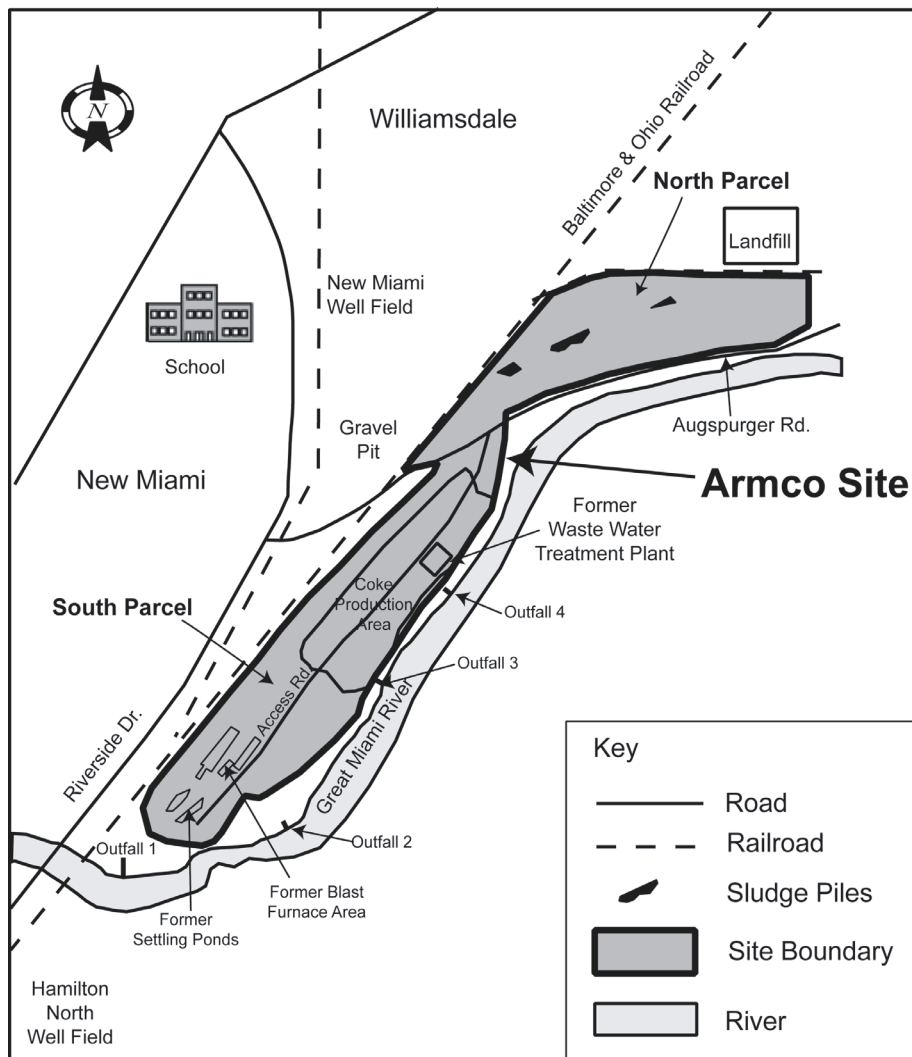
This as well as future fact sheets will be placed on the following Web site:

www.epa.gov/region5/sites/

Click on Ohio and scroll down until you find the Armco Hamilton site.

U.S. Environmental Protection Agency will oversee a pollution study for the Armco Hamilton Superfund site in New Miami. The study, which EPA calls a "remedial investigation," will identify the types and amounts of contamination in the soil, mud (sediment), surface water and underground water (ground water) on and near the former industrial site. The study will also evaluate human health and environmental risks posed by the pollution, which is mainly waste from years of steel production.

AK Steel Corp., which is the current owner of the former Armco plant site, is doing the study under a legal agreement with EPA. Information collected by the investigation will be published in an EPA document called a "remedial investigation report." (See *"The Superfund cleanup process" on the back page of this fact sheet.*) You can contribute to the project through comments, suggestions and questions by contacting the EPA representatives listed in the box on the left.



Map of Armco Hamilton site and surrounding area.

Pollution study details

The investigation at the site will include the following:

- reviewing previous studies, sampling data, site visits and interviews
- sampling the former coke production area, settling ponds and sludge piles to confirm that all of the waste from those areas was removed
- studying the landfill using specialized equipment to map its boundaries
- sampling of the waste, the rain water that has mixed with the waste called leachate and soil and ground water around the perimeter of the landfill
- ground-water sampling throughout the entire site to determine if contaminants are present and the direction and speed of the ground-water flow
- if the ground-water sampling shows contamination is moving, further sampling will be done to identify the boundaries of the mass of ground-water contamination (called a plume)
- reviewing available public and private water supply well information within one-half mile of the property boundary
- sampling throughout the site to identify the amounts and types of contamination that may be in the soil. If contamination is found, additional sampling will be done until the full extent of the pollution is known. Soil sampling will also help determine the geology beneath the site.
- surface water and mud (sediment) sampling in the Great Miami River and a tributary located along the eastern boundary of the landfill to determine the presence and extent of contamination from the site that may have reached the river. An additional sediment and surface water study will be done upstream from the site where the former coke oven gas pipeline crossed beneath the Great Miami River.

EPA does not expect the need for air monitoring. However, if contaminated dust becomes airborne and poses a potential health risk, then an air monitoring program may be required.

Health risks checked

The final phase of the pollution investigation will be to study the potential risks to human health and the environment. The sampling will be used to develop a human health risk assessment and a wildlife (ecological) risk assessment.

The human health risk assessment will examine in what ways people could come into contact with site contaminants and the potential risks associated with the various types of exposures.

The ecological risk assessment will involve identifying the types of both land and aquatic life (plants and animals) that could be exposed to pollution and assessing the potential risks to them. The areas that will be studied will include the site property itself, the Great Miami River, and any potential land and wetland habitats identified during the investigation.

Upon completion of the pollution study, AK Steel, under the oversight of EPA, will evaluate various ways to clean up the site. The cleanup alternatives examined will be published in a document called a “feasibility study report” and made available to the public for comment.

Site location and description

The Armco Hamilton site consists of about 252 acres divided between two pieces of property north and south of Augspurger Road in the village of New Miami, about 1.5 miles northeast of downtown Hamilton, Butler County, Ohio. The site is an inactive facility that produced iron for steel making. The site is bordered to the south and east by the Great Miami River, and to the north and west by the Baltimore and Ohio Railroad tracks.

The former manufacturing portion of the site consists of a fenced parcel located south of Augspurger Road. The northern portion of the site includes a rail yard where piles of waste from air pollution cleaning equipment were stored. A 4.5-acre closed landfill is located north of the rail yard. It is covered with grass and fenced. A small unnamed tributary borders the landfill to the east and flows east to the Great Miami River. The river runs along the entire eastern length of the Armco site. The property is close to both public and private drinking water wells.

Underground water

The former plant site is located above a large supply of ground water called an aquifer. The plant had four water wells at the south end of the site. The city of Hamilton and the village of New Miami have well fields located within a half mile of the site. The Hamilton North well field is located on the south side of the Great Miami River, 1,700 feet south of the former plant site and in the path of the ground-water flow from the site. Another public water supply identified in the area is a half mile north of the New Miami water plant on state Route 127.

Residential wells and small community wells are also present in nearby Williamsdale and in several nearby mobile home parks.

Site history

The facility began operations as a steel mill around 1900 and has changed ownership several times. Armco (American Rolling Mills Co.) purchased the site from the Hamilton Coke and Iron Co. in 1937. AK Steel Corp. was a general partner of Armco and is the current owner of the site.

The coke plant covered about 50 acres in the north-central portion of the south parcel. Nearly 2,000 tons of coke were produced each day. Tar waste from this process was periodically disposed of in the on-site landfill.

The landfill operated from the early 1960s to 1980. Although used primarily for the disposal of tar waste, the landfill also received an unknown amount of rubble, trash and industrial waste.

The blast furnace operation consisted of two furnaces, each producing about 1,000 tons of iron per day. The operation occupied about 10 acres at the south end of the site. Byproducts from the blast furnace included slag and large amounts of dust. Wastewater from the blast furnace was placed into one of two unlined ponds where the solid matter settled. This "sludge" was periodically dredged from the two settling ponds and stored in unlined piles in the rail yard. Because the sludge had a high iron content, it was eventually reused in iron production.

Before September 1987, an unknown amount of wastewater from the blast furnace was regularly released from the settling ponds into the Great Miami River under a federal discharge permit. In 1987, Armco began reusing all blast furnace wastewater to remove lead and zinc as required by a new federal permit.

In total, Armco operated four drainage areas (called outfalls) that discharged to the Great Miami River. Outfall 1 consisted of wastewater from the blast furnace as well as cooling water and stormwater runoff. Outfall 2 discharged cooling water from the condensers and water from the wastewater treatment plant. Outfalls 3 and 4 were for stormwater runoff only.

Previous site investigations

Ohio EPA studied the Armco Hamilton site in June 1983. However, the study did not determine the full extent of the contamination at the site so more investigation was needed.

In 1988, EPA inspected the property and took samples of soil, sediment, sludge piles, settling ponds and ground water and also sampled drinking water wells in the area. Samples were also collected from two nearby municipal water wells, several on-site wells and one nearby residential well. The results of this sampling revealed contamination in on-site sediment, sludge piles and settling ponds. No contaminants were detected at unsafe levels in any of the drinking water wells sampled in 1988.

EPA sampling was also done at the site in 1993 and showed the presence of contaminants in on-site soil, waste and sediment.

Three monitoring wells were installed in the southern portion of the site in 1999. The wells were checked three times between January 2000 and March 2001 and dangerous levels of pollution were not found. However, the wells, all at the south end of the site, were drilled to a depth of around 100 feet and would not capture contaminants located closer to the surface or pollution in the northern part of the site.

Technical assistance grants

The technical assistance grant program provides up to \$50,000 to community groups to hire technical advisors so citizens can better understand and interpret Superfund-site related technical information. Groups must represent the entire community, hire reputable advisors to review and interpret technical information in lay terms, and use their grant money to inform everyone rather than only group members.

For further information, contact Susan Pastor at the phone number or e-mail address listed on the front of this fact sheet.

Mailing list additions

If you would like to add your name to the mailing list for the Armco Hamilton site, please fill out this form and mail it to Susan Pastor at the address listed on the front of this fact sheet.

Name _____

Address _____

Affiliation _____

Phone (Daytime) _____ (Evening) _____

E-mail Address _____

The Superfund cleanup process

Superfund was enacted by Congress in December 1980. The law established a program to investigate and clean up actual or potential releases of hazardous chemicals and other substances at sites throughout the United States. EPA administers the Superfund program in cooperation with state environmental agencies.

The Superfund process can differ for each site. However, there are usually six phases, which include:


- identification
- a preliminary inspection to assess the presence of hazardous chemicals
- proposal and/or placement on the National Priorities List (a list of hazardous waste sites eligible for cleanup and investigation under the Superfund program)
- a two-part investigation called a remedial investigation/feasibility study, which identifies the

type of contamination present and evaluates ways to clean up the site

- proposal of a cleanup plan
- the design and implementation of the cleanup plan

At any time during this process, EPA may conduct what's called "an emergency response action" if the site becomes an immediate threat to human health or the environment.

EPA attempts to identify one or more parties potentially responsible for site contamination. If the responsible parties agree to cooperate, they may then conduct the site investigation under EPA supervision. If no responsible party is found or if they do not cooperate, EPA will conduct the investigation. EPA may later recover the costs from the responsible parties through legal action.

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